

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for connecting a first user terminal of a first virtual private network to a second user terminal of a second virtual private network, over a network ~~such as the internet~~, said network having a plurality of user terminals and a plurality of network access servers, each of said plurality of user terminals being coupled to a respective network access server of said plurality of network access servers, comprising:
 - a. making a connection of said second user terminal to a first network access server, wherein said first network access server is said respective network access server of said second user terminal;
 - b. in response to said connection of said second user terminal, sending connection information from said first network access server to a subscriber data server included in said network and coupled to each of said plurality of network access servers;
 - c. updating a database of said subscriber data server based on said connection information;
 - d. upon an incoming request of communication from said first user terminal to said second user terminal, said subscriber data server locating said respective network access server connected to said second user terminal and notifying said second user-terminal based on said request of communication from said first user-terminal; and
 - e. switching said second user terminal from said second virtual private network to said first virtual private network in response to said locating.

2. (previously presented): The method according to claim 1, wherein:
said incoming request of communication is an incoming call request from said first user-terminal and is handled by said subscriber data server;
said locating includes searching in said database of said subscriber data server for connection information of said second user-terminal;
said subscriber data server uses said connection information to determine said virtual private network and said respective network access server connected to said second user-terminal;
said subscriber data server indicates said incoming call request to said respective network access server connected to said second user-terminal; and
said respective network access server connected to said second user-terminal notifies said second user-terminal of said incoming call request.
3. (previously presented): The method according to claim 1, wherein said step of notifying said second user-terminal, based on said requesting of said communication from said first user-terminal, is performed over a transparent connection between said subscriber data server and said second user-terminal via said first network access server.
4. (previously presented): The method according to claim 1, further comprising, before said step d:
receiving said incoming call request of said first user-terminal at said respective network access server connected to said first user-terminal; and
said respective network access server connected to said first user-terminal sending said incoming call request of said first user-terminal to said subscriber data server.
5. (previously presented): The method according to claim 1, further comprising, before said step d, sending said incoming call request of said first user-terminal over a transparent

connection between said first user-terminal and said subscriber data server via said network access server connected to said first user-terminal.

6. (previously presented): A network access server for enabling a connection over a network between two user terminals of two different virtual private networks, wherein each of said user terminals is coupled to a respective network access server, the network access server comprising:
switch notification reception means for receiving a request, from one of said user terminals, to initiate a switch-over of a connection from one of said virtual private networks to the other;
switching means, coupled with said switch notification reception means, for performing said switch-over of said connection; and
user terminal connect notification sending means, coupled with said switching means, for sending connection information to a subscriber data server, upon the connecting of one of said user terminals to said network access server and upon said switch-over of said connection of one of said user terminals from the one of the virtual private networks to the other.

7. (previously presented): The network access server according to claim 6, further comprising:
connection establishment request reception means for receiving from said subscriber data server a connection request to establish said connection between said two user terminals;
and
connection establishment request sending means, coupled with said connection establishment requesting reception means, for notifying one of said user terminals about an incoming call from another of said user terminals.

8. (currently amended): A network access server, defined as a second network access server, intended for use in a network operating according to a method for connecting a first user terminal of a first virtual private network to a second user terminal of a second virtual private network, ~~said network being a network such as the internet~~, said network having a plurality of user terminals and a plurality of network access servers including said network access server, each of said plurality of user terminals being coupled to a respective network access server of said plurality of network access servers, the network operating method comprising:

- a. making a connection of said second user terminal to a first network access server, wherein said first network access server is said respective network access server of said second user terminal;
- b. in response to said connection of said second user terminal, sending connection information from said first network access server to a subscriber data server included in said network and coupled to each of said plurality of network access servers;
- c. updating a database of said subscriber data server based on said connection information;
- d. upon an incoming request of communication from said first user terminal to said second user terminal, said subscriber data server locating said respective network access server connected to said second user terminal and notifying said second user-terminal based on said request of communication from said first user-terminal; and
- e. switching said second user terminal from said second virtual private network to said first virtual private network in response to said locating.

wherein:

said incoming request of communication is an incoming call request from said first user-terminal and is handled by said subscriber data server;

said locating includes searching in said database of said subscriber data server for connection information of said second user-terminal;

said subscriber data server uses said connection information to determine said virtual private network and said network access server connected to said second user-terminal;

said subscriber data server indicates said incoming call request to said respective network access server connected to said second user-terminal;

said respective network access server connected to said second user-terminal notifies said second user-terminal of said incoming call request;

wherein said second network access server comprises:

connection establishment request reception means, adapted to receive a connection request from said first user-terminal to establish said connection between said first user-terminal connected to said first virtual private network and said second user-terminal connected to said second virtual private network; and

connection establishment request sending means, coupled with an input to an output of said connection establishment requesting reception means and adapted to notify said subscriber data server about an incoming call from said first user-terminal.

9. (previously presented): A network access server according to claim 6, further comprising:
connection establishment request reception means for receiving from one of said user terminals a connection request to establish said connection between said two user terminals; and
connection establishment request sending means, coupled with said connection establishment requesting reception means, for notifying said subscriber data server about an incoming call from the one of said user terminals.

10. (previously presented): A subscriber data server, intended for use in a network having user terminals communicating with respective network access servers, wherein the network access servers communicate with the subscriber data server, and wherein some of the user terminals are in different virtual private networks, the subscriber data server comprising:

a connection information database;

user terminal connect notification reception means, adapted to receive connection information upon the connection of one of the user terminals to one of the network access servers;

user terminal connect notification updating means, coupled with the user terminal connect notification reception means, for updating the connection information database based on the connection information;

connection establishment request reception means for receiving a connection request, from a first one of the user terminals a first one of the virtual private networks, to establish a connection with a second one of the user terminals in a second one of the virtual private networks;

connection information searching means, coupled with the connection establishment request reception means, for searching in the connection information database for the connection information of the second user terminal; and

connection establishment request sending means, coupled with the connection information searching means, for notifying the second user terminal about an incoming call from said first user terminal, according to the connection information of the second user terminal.

11. (previously presented): A user terminal intended for use in a network having user terminals communicating with respective network access servers, wherein the network access servers communicate with a subscriber data server, and wherein some of the user terminals are in different virtual private networks, the user terminal comprising:

connection establishment request reception means for receiving, from the respective network access server of the user terminal, a connection request of a different user terminal from a different virtual private network to establish a connection to the user terminal;

incoming call handling means, coupled with the connection establishment request reception means, for handling the connection request from the different user terminal; and

switch requesting means, coupled with the incoming call handling means, for requesting the respective network access server to switch the connection of the user terminal from a current virtual private network to the different virtual private network of the different user terminal.

12. (previously presented): A software module for running on a processing system for inclusion in a subscriber data server, intended for use in a network having user terminals communicating with respective network access servers, wherein the network access servers communicate with the subscriber data server, and wherein some of the user terminals are in different virtual private networks, the software module comprising:

- a user terminal connect notification reception sub-module, adapted to receive connection information, upon connection of any of the user terminals to any one of the network access servers;
- a user terminal connect notification updating sub-module, cooperating with the user terminal connect notification reception sub-module, and adapted to update a connection information database based on the connection information;
- a connection establishment request reception sub-module, adapted to receive a connection request from a first one of the user terminals of one of the virtual private networks, to establish a connection with a second one of the user terminals of a different one of the virtual private networks;
- a connection information searching sub-module, cooperating with the connection establishment request reception sub-module, and adapted to search the connection information database for connection information of the second user terminal; and
- a connection establishment request sending sub-module, cooperating with the connection information searching sub-module, and adapted to notify the second user terminal about the incoming call from the first user terminal.

13. (previously presented): A software module intended for use in a given user terminal of a network having user terminals communicating with respective network access servers, wherein the network access servers communicate with a subscriber data server, and wherein some of the user terminals are in different virtual private networks, the software module comprising:

- a connection establishment request reception sub-module, adapted to receive from the respective network access server a connection request, of a different user terminal, to establish a connection to the given user terminal;
- an incoming call handling sub-module, cooperating with the connection establishment request reception sub-module, and adapted to handle the connection request; and
- a switch requesting sub-module, cooperating with the incoming call handling sub-module, and adapted to request the respective network access server of the given user terminal to switch the connection of the given user terminal from a current virtual private network to the different virtual private network of the different user terminal.

14. (previously presented): The method according to claim 1, wherein the step e further comprises:

- a. said second user terminal initiating and controlling a switch-over of said connection of said second user terminal from said second virtual private network to said first virtual private network;
- b. said first network access server switching said connection of said second user terminal from said second virtual private network to said first virtual private network; and
- c. upon switch-over of said connection of said second user terminal from said second virtual private network to said first virtual private network, sending connection information from said first network access server to said subscriber data server .